AMSAT News Service Weekly Bulletins
Issue: ANS-159
Date: 1997-06-08
Sources: amsat-ans-1997-ans-159-weekly.txt

Please notify listserv@amsat.org if you would like to subscribe, un-subscribe or change your Internet address for any of the AMSAT lists. You may request to be added or deleted from the following lists: AMSAT-BB, ANS, SAREX, or KEPS. Please *do not* send such requests to the lists themselves.

SB SAT @ AMSAT $ANS-159.01
STS-94 SAREX MISSION PT.1

HR AMSAT NEWS SERVICE BULLETIN 159.01 FROM AMSAT HQ
SILVER SPRING, MD, JUNE 08, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-159.01

STS-94 Nominal orbital data is now available on the AMSAT Web Page. The time-independent State Vector and the Keplerian elements corresponding to the scheduled launch time of 01-JUL-97 / 18:37 UTC are available at:

http://www.amsat.org/amsat/sarex/orbit.html

The full set of nominal state vectors and mission profile schedule is also available on the AMSAT Web page at:

http://www.amsat.org/amsat/sarex/vectors.html

As in the past, updates will be made to the AMSAT Web page using actual orbital data during the mission E-Mail updates are no longer made to the SAREX mailing list during the mission. These updates were discontinued when NASA Spacelink began sponsoring a mailing list called *STSTLE* for this specific purpose. Subscriptions to STSTLE are available on request. To subscribe send an E-Mail message to the following address:

listproc@spacelink.msfc.nasa.gov

The text of the mail message should be as follows:
subscribe STSTLE FirstName LastName

Where "FirstName" and "LastName" provide the list manager with your name.

Those considering subscribing to STSTLE should be cautioned that the list typically provides three to four updates per day on the Shuttle (and also for any satellites deployed by the Shuttle). The frequency of updates ensures current data for several NASA agencies that subscribe to this mailing list. If this many updates are undesirable, you should get your Keplerian elements from a different source.

Ken Ernandes, N2WWD, created one additional source for Shuttle orbital data. In some high-interest SAREX missions, Ken had received E-Mail messages from individuals having difficulty accessing the AMSAT Shuttle Orbital Data Web page. These individuals did not want to subscribe to STSTLE because of the frequency of updates. Therefore, Ken provides a backup source of a current STSTLE update message on his personal Web page. This page may be accessed at:

http://www.mindspring.com/~n2wwd

Because of the workload in providing updates to both the AMSAT Web page and

the STSTLE mailing list, Ken's personal Web page is sometimes only updated with the STSTLE message at ~13:00 UTC and ~20:00 UTC during the missions. Thus, the AMSAT page is the primary data source on the World Wide Web.

[ANS thanks Ken Ernandes, N2WWD, for this information about STS-94.]

/EX

SB SAT @ AMSAT $ANS-159.02
STS-94 SAREX MISSION PT.2

HR AMSAT NEWS SERVICE BULLETIN 159.02 FROM AMSAT HQ
SILVER SPRING, MD, JUNE 08, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-159.02

During SAREX missions, the astronauts will typically make the following types of Amateur Radio contacts:

- Scheduled radio contacts with schools.
- Random radio contacts with the Amateur Radio community.
- Personal contacts with the astronauts' families.

CREW MEMBERS (titles and Amateur Radio call signs):
James D. Halsell, Commander, KC5RNI
Susan L. Still, Pilot
Janice E. Voss, Payload Commander, KC5BTK
Donald A. Thomas, Mission Specialist, KC5FVF
Michael L. Gerhardt, Mission Specialist
Roger Crouch, Payload Specialist
Greg Linteris, Payload Specialist

The SAREX Working Group has designated the following frequencies during this mission.

FM Voice Downlink: (Worldwide) 145.55 MHz
FM Voice Uplink: 144.91, 144.93, 144.95, 144.97, and 144.99 MHz
FM Voice Uplink: (Europe only) 144.70, 144.75, and 144.80 MHz
FM Packet Downlink: 145.55 MHz
FM Packet Uplink: 144.49 MHz

The crew will use separate receive and transmit frequencies. PLEASE do not transmit on the shuttle's DOWNLINK frequency. The DOWNLINK is your receiving frequency. The UPLINK is your transmitting frequency.

The crew will not favor either uplink frequency, so your ability to communicate with SAREX will be the "luck of the draw." Transmit only when the shuttle is within range of your station, and when the shuttle's station is on-the-air.

CALL SIGNS:

- FM voice call signs: KC5RNI, KC5BTK and KC5FVF
- FM packet call sign: W5RRR-1

QSL VIA: Send reports and QSLs to ARRL EAD, STS-94 QSL, 225 Main Street, Newington, CT 06111-1494, USA. Include the following information in your QSL or report: STS-83, date, time in UTC, frequency and mode (FM, voice or packet). In addition, you must also include a SASE using a large, business-sized envelope if you wish to receive a card.

[ANS thanks the ARRL for this information.]

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SB SAT @ AMSAT $ANS-159.03
RS NEWS FROM G3IOR

HR AMSAT NEWS SERVICE BULLETIN 159.03 FROM AMSAT HQ
SILVER SPRING, MD, JUNE 08, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-159.03

RS-10 still silent:
RS-10's beacon, ROBOT and transponder remain silent whilst designer and builder Andy Papkov carries out experimental work with the satellite from the RS3A command station. Leonid Labutin UA3CR reports that it is hoped that RS-10 will be active again soon, long before it's tenth birthday.

Special Event Station:
From 21st June until 29th June a group of keen RS enthusiasts consisting of G4CUO, G4ZHG, G6HMS, G0MKA, G7MUB, G8DYK and G0MKA will be celebrating the ten years of faultless operation provided by the Russian RS-10 satellite. They will be active with the callsign GB0RAS on all modes on each and every pass of RS-10, RS-12, RS-15 and the Japanese FUJI satellites

also. A serial number will be given for all QSO's on each satellite, and a very special QSL card will be sent to each station contacted or SWL report received.

RS-14/AO-21 Resurrection?
Rumors are circulating that a strong possibility exists that the commanding problems with OSCAR-21 alias RS-14 may soon be resolved. It is not impossible that this highly popular but long silent satellite may re-appear shortly.

RS-15 Problems:
Where six months back RS-15 was self-switching all it's systems off soon after entering eclipse, then two months ago continuing to function well into shadow, RS-15's transponder and beacon is now switching off even when under solar cell battery charge in daylight. This effect is evidenced whenever high power uplink stations come up on the transponder. The satellite normally recovers within a few seconds, only to switch off again when the QRO operator(s) re-appear. The lesson to be learned is for users to improve their downlink reception, and NOT to increase their uplink power in order to hear (just) themselves. 100w ERP is more than enough to produce an adequate signal from RS-15 on the single proviso that other users do not run more than this.

RS-16 progress:
Andy Mirinov RK3KPK reports that RS-16 "now has a new voice on CW"
All reports received by Andy of this latest Russian satellite will be answered by him with a QSL card.

[ANS thanks Pat, G3IOR, and Andy Mirinov, RK3KPK, for
this news about the RS satellites.]

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SB SAT @ AMSAT $ANS-159.04
UO-22 INFO

HR AMSAT NEWS SERVICE BULLETIN 159.04 FROM AMSAT HQ
SILVER SPRING, MD, JUNE 08, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-159.04
A recent problem with UO-22 seems to be related to the software changes that were made last week prior to the last flight software reload. During the last pass over Surrey on Saturday morning, June 7th, Chris Jackson,

G7UPN / ZL2TPO , closed the spacecraft store and forward communications system for general use to allow him to diagnose the problem. Chris reports

he will make changes to the spacecraft software and a reload of the communications system will be carried out, as soon as practical.
A complete software reload should not be required and it will be a simple case of reloading the communications task only. This will only take a couple of minutes assuming a good uplink and European operators are asked NOT to transmit to the spacecraft until it is open for use.

[ANS thanks Chris Jackson, G7UPN / ZL2TPO, Groundstation and Operations Manager. Surrey Satellite Technology Ltd, University of Surrey, for this update.]

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SB SAT @ AMSAT $ANS-159.05
WEEKLY SATELLITE REPORT PT 1

HR AMSAT NEWS SERVICE BULLETIN 159.05 FROM AMSAT HQ
SILVER SPRING, MD, JUNE 08, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-159.05

MIR:
(Uplink 145.2 MHz FM Downlink 145.8 MHz FM)
Note, the above split is used for both packet and voice operation.
ANS has received many reports that both the voice and packet stations are operating on 145.800 MHz simplex. Also note that the MIR packet station, R0MIR-1, is operational.
[ANS thanks Claudio Ariotti, IK1SLD, for this report.]
Greg, KO6TH, told ANS that the MIR packet station, R0MIR-1, may be using 145.800 SIMPLEX, not the minus offset.
Greg did manage to digipeat through R0MIR to KJ7UI, and exchanged a quick greeting. Gene, N7CKA reports he worked MIR, on packet and voice, on simplex twice June 8th. He made a contact at 0652 UTC and again on the next pass at 0828 UTC had a contact with KB5UAC.

SAFEX, MIR 70cm Repeater
(Uplink 435.750 MHz FM, Downlink 437.950 MHz FM, Subaudible tone 141.3 Hz)
Francisco Costa, CT1EAT, reports he is happy to announce you that
MIR's UHF Voice Repeater is again on!
 CT1EAT just work ON6GP on the June 7th pass over Europe, between 1952-2001 UTC..
[ANS thanks Francisco Costa, CT1EAT, for this report.]

RS-10
(Uplink 145.865-145.905 MHz CW/SSB, Downlink 29.36-29.4 MHz CW/SSB)
RS-10 Still silent.
RS3A needs some SWL reports of RS-10.
What time you heard RS-10, and also the date.
Send info via packet to Andy, .RS3A.
Packet: RK3KPK@RA3KP.MSK.RUS.EU

RS-12
(Uplink 21.21-21.25 MHz CW/SSB, Downlink 29.41-29.45 MHz or 145.91-145.95 Mhz CW/SSB)
Signals on RS-12 in North America during May and June (almost exclusively daylight passes) are weakened by increased ionospheric activity which is keeping 15m active during the daylight hours.
This makes it especially important for the 'old timers' to warn the

newcomers on RS-12 to set their uplink frequency and leave it alone to
prevent sweeping across the 15m band and QRM-ing the terrestrial QSOs
in progress
[ANS thanks Dick Montgomery, N3DV, for this update.]

RS-15
(Uplink 145.858-145.898 MHz CW/SSB, Downlink 29.354-29.394 MHz CW/SSB)
Be aware that RS-15 has battery charging problems. When the satellite is
in the dark it has low output power..
[ANS thanks Geoff Perry for this report.]
(Hint: If SSB doesn't work for you, try CW. CW is very easy
to hear on the downlink!)

RS-16
RS-16's 435.504 MHz beacon is active.
The transponder and the 10 meter beacons are not
active at this time.
Transponder information on RS-16.
Uplink = 145.915 - 145.948 MHz
Downlink = 29.415 - 29.448 MHz
Beacons = 29.408 , 29.451 MHz
Pwr 29 MHz Down = 1.2 W /4 W

Beacon 1 = 435.504 MHz
Beacon 2 = 435.548 MHz
Pwr 435 MHz Beacons = 1.6 W
 [ANS thanks Chuck Duey, KI0AG, for this report.]

FO-20
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9
MHz CW/USB)
Operating normally. Strong downlink signal. Very busy
during passes over North America. Please remember to adjust the
higher frequency for doppler when the bird is in analog, JA, mode.
This means adjust the 70 cm frequency, the downlink, for doppler
shift. You do not have to adjust the 2 meter frequency, the uplink,
for doppler.

KO-23
(Uplink 145.85, 145.9 MHz FM, Downlink 435.175 MHz FM,
9600 Baud FSK.)
KO-23 operating normally. Ronald Osborne, an
Amsat Area Coordinator, reports copying KO-23 from 01:04-01:17Z, 01 JUN.
There is a message "KO-23 will be reset between June 4 and June 6".
[ANS thanks Ronald Osborne, N2OGB, for this report.]

KO-25
(Uplink 145.980 MHz FM, Downlink 436.5 MHz FM,
9600 Baud FSK.)
KO-25 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for his reports on
KO-25 and KO-23.]

AO-27
(Uplink 145.85 MHz FM, Downlink:
 436.792 MHz FM (As of April 1, 1997)
Operating normally.
AO-27 (1-Jun-1997- 10:58 UTC Orbit-19182)
The satellite is working normally over North America.
and Europe.
Current AO-27 schedule information can be found at
 www.umbra.com

  Tepr 4 = 32 counts   16 Minutes

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  Tepr 5 = 66 counts   18 Minutes
The Transmitter xtal is changing with time.  From the first day AO-27
was in orbit the Transmit Frequency has been shifting lower.  Many
have not checked the zero doppler frequency closely enough to see that it
is dropping.  Every few months Michael Wyrick, N4USI, has to change
a setting that moves the freq. a KHz or so up in freq.  This setting only
has a range of about 7 KHz total. This means that after a while Michael
can't compensate for the change and has to reset the setting back to zero.
This causes the freq. to drop about 7 KHz when he does this.  There is not
a way around this and the Tx freq. will continue to drop as the xtal ages.

The satellite is coming up on the end of range for this setting and in
several months the freq. will seem to drop again.  If N4USI had not put the

correction hardware on-board, you would see a continuous shift in tx
frequency. AO-27 Will turn on Every pass 16 Minutes after entering the sun
and  will stay on for 18 minutes.  This corrects the early shut off that
has been going on for the passed few weeks.
[ANS thanks Michael Wyrick, N4USI, AO-27 Control-op, for this update.]

FO-29
Voice/CW
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Digital
(Uplink 145.85, 145.87, 145.910 MHz FM, Downlink 435.910 MHz FM 9600 baud
BPSK)
Please remember to adjust the
higher frequency for doppler when the bird is in analog, JA, mode.
This means adjust the 70 cm frequency, the downlink, for doppler
shift. You do not have to  adjust the 2 meter frequency, the uplink,
for doppler.

The latest FO-29 Schedule can be found at.
http://www.kt.rim.or.jp/~jr1nvu/eindex.html
          June 6(Fri)  08:25z JA
         13(Fri)  00:39z JD 1200bps PSK MailBox
         20(Fri)  09:41z JD 9600bps FSK MailBox
         27(Fri)  00:11z JA
     July 4(Fri)  09:13z JD Digi-talker
          8(Fri)  09:06z JA
 [ANS thanks Kazu Sakamoto, JJ1WTK, for this report.]

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SB SAT @ AMSAT  $ANS-159.06
WEEKLY SATELLITE REPORT PT 2

HR AMSAT NEWS SERVICE BULLETIN 159.06 FROM AMSAT HQ
SILVER SPRING, MD, JUNE 08, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-159.06

AO-10
 (Uplink 435.030-435.18 MHz CW/LSB, Downlink 145.975-145.825 MHz
CW/USB)
Mike West  ,WL7BQM, reports  on
June 4th at 22:33 UTC phases 184, alt of 29500 km, range at  35000
km (ALASKA)  signal was strong when sun was on solar panels.

Mike, N1JEZ,  made a quick check of AO-10 tonight June 3rd at 0122 UTC.
The bird was 17,000 km away from him.  He heard the beacon. Very Weak,
maybe a slight bit of FM'ing, but very small change. Mike did a quick voice

check, and did hear his downlink. No perceptible FM'ing on his voice.
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OSCAR-11
(Downlink 145.825 MHz. FM, 1200 Baud PSK. Beacon 2401.500 MHz..)
Operating normally.
Telemetry nominal. The battery voltage has recently improved to around 13.9 volts, and the internal temperatures have continued to fall, due to solar eclipses. The battery temperature is now 4 degrees C, or 18 degree below the full sunlight condition.

The operating schedule is unchanged.
ASCII status (210 seconds)
ASCII bulletin (60 seconds)
BINARY SEU (30 seconds)
ASCII TLM (90 seconds)
ASCII WOD (120 seconds)
ASCII bulletin (60 seconds)
BINARY ENG (30 seconds)

[ANS thanks Clive Wallis, G3CWV, for this information.]

AMSAT-OSCAR-16 (PACSAT)
(Uplink 145.9, 145.92, 145.94, 145.86 MHz FM, 1200 bps Manchester FSK
Downlink 437.0513 MHz SSB, 1200 bps RC-BPSK 1200 Baud PSK.
Beacon 2401.1428 Mhz.)
(A)non-daylight orbit and (B) daylight orbit
(A)
uptime is 993/17:29:03. Time: Sat Jun 07 22:54:13 1997
Bat 1 V 1.275 V Bat 2 V 1.276 V
Bat 3 V 1.291 V Bat 4 V 1.296 V Bat 5 V 1.272 V
Bat 6 V 1.276 V Bat 7 V 1.272 V Bat 8 V 1.276 V
Total Array C= 0.000 Bat Ch Cur=-0.338 Ifb= 0.253 I+10V= 0.105
TX:010B BCR:1E PWRC:59E BT:3C WC:25 EDAC:47
(B)
uptime is 993/17:34:03. Time: Sat Jun 07 22:59:13 1997
Bat 1 V 1.381 V Bat 2 V 1.384 V
Bat 3 V 1.408 V Bat 4 V 1.362 V Bat 5 V 1.365 V
Bat 6 V 1.434 V Bat 7 V 1.476 V Bat 8 V 1.412 V
Total Array C= 0.252 Bat Ch Cur=-0.046 Ifb= 0.020 I+10V= 0.332
TX:010B BCR:75 PWRC:59E BT:3C WC:25 EDAC:47

Graphic information about WOD/Telemetry values can be found at:
http://www.arrakis.es/~ea1bcu/wod.htm

[ANS thanks Miguel A. Menendez, EA1BCU, for this report.]

DO-17(DOVE)
(Downlink 145.825 MHz FM, 1200 Baud AFSK.
Beacon 2401.220 MHz.)
WJ9F is continuing to work on reloading DOVE.
[ANS thanks Jim white, WD0E, DO-17 Command Team, for this news.]

WEBERSAT (WO-18)
(Downlink 437.104 MHz SSB, 1200 Baud PSK AX.25.)
Webersat (WO-18) is currently in MBL mode after a system crash. The satellite appears to be in good condition broadcasting MBL telemetry.
[ANS thanks Tommy Davis, IK3WVJ, for this report.]

LUSAT-OSCAR-19
(Uplink 1200 bps Manchester FSK Uplinks:
145.84, 145.86, 145.88, 145.9 MHz FM, Downlink 437.125 MHz SSB,
1200 bps RC-BPSK.)
Operational.
(A)non-daylight orbit and (B) daylight orbit

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 (A)
uptime is 718/09:14:14.  Time: Sat Jun 07 23:19:24 1997
Bat 1 V  1.282 V  Bat 2 V  1.286 V
Bat 3 V  1.302 V  Bat 4 V  1.290 V  Bat 5 V  1.294 V
Bat 6 V  1.290 V  Bat 7 V  1.297 V  Bat 8 V  1.282 V
Total Array C= 0.071 Bat Ch Cur=-0.145 Ifb= 0.008 I+10V= 0.144
TX:016 BCR:1E PWRC:36E BT:3C WC: 0
(B)
uptime is 718/21:32:57.  Time: Sun Jun 08 11:38:07 1997
Bat 1 V  1.374 V  Bat 2 V  1.375 V
Bat 3 V  1.398 V  Bat 4 V  1.380 V  Bat 5 V  1.405 V
Bat 6 V  1.441 V  Bat 7 V  1.386 V  Bat 8 V  1.382 V
Total Array C= 0.319 Bat Ch Cur= 0.116 Ifb= 0.054 I+10V= 0.129
TX:011 BCR:38 PWRC:313A31 BT:35 WC:37

Graphic and general information about Telemetry values can be found at:
http://www.arrakis.es/~ea1bcu/lo19.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report.]

UO-22:
(Uplink: 145.9 or 145.975 MHz FM. Downlink 435.120 MHz FM
9600 Baud FSK.)
A problem with UO-22 seems to be related to the software changes that
were made last week prior to the last flight software reload.  During
the last pass over Surrey on Saturday morning, June 7th, Chris Jackson
closed the spacecraft store and forward communications system for general
use to allow him to diagnose the problem..
[ANS thanks Chris Jackson, G7UPN / ZL2TPO,
Groundstation and Operations Manager, for this report.]

IO-26 ( ITAMSAT)
(Uplink 145.875, 145.9, 145.925, 145.95MHz FM, Downlink 435.822 MHz SSB,
1200 Baud PSK.)
IO-26 controllers report that the spacecraft is now in IHT mode.  The new
ROBOT software is under currently undergoing tests.  The beacon reports
that the digipeater is OFF and that the ROBOT is undergoing tests.
Controllers ask that groundstations please do not transmit on any of
the satellite's uplink frequencies for the time being.
[ANS thanks Daniele Piercarlo, IK2XRO, ITMSAT Command Station for this
report.]

[Please send your Satellite or News reports to ANS Editor B.J. Arts, WT0N,
via e-mail, at bjarts@the-bridge.net or to wt0n@amsat.org]

/EX
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